DEPARTMENT OF PERMITTING, ENVIRONMENT, AND REGULATORY AFFAIRS (PERA)
BOARD AND CODE ADMINISTRATION DIVISION

MIAMI-DADE COUNTY
PRODUCT CONTROL SECTION
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NOTICE OF ACCEPTANCE (NOA)

Carlisle Syntec, Inc.
1285 Ritner Highway
Carlisle, PA 17013

SCOPE:

This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County PERA - Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. PERA reserves the right to revoke this acceptance, if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein, and has been designed to comply with the Florida Building Code including the High Velocity Hurricane Zone of the Florida Building Code.

DESCRIPTION: Carlisle Sure-Weld Single Ply TPO Roof Systems over Lightweight Concrete Decks

LABELING: Each unit shall bear a permanent label with the manufacturer's name or logo, city, state and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

RENEWAL of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

TERMINATION of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

ADVERTISEMENT: The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

INSPECTION: A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This revises NOA #08-0414.09 and consists of pages 1 through 10.
The submitted documentation was reviewed by Alex Tigera.

ROOFING SYSTEM APPROVAL

Category:	Roofing
Sub-Category:	Single Ply
Material:	TPO
Deck Type:	Lightweight Concrete Decks
Maximum Design Pressure	-322.5 psf
Fire Classification:	See General Limitation #1

TRADE NAMES OF PRODUCTS MANUFACTURED OR LABELED BY APPLICANT:

TABLE 1

Product Name	Dimensions	Test Specifications	Product Description
Sure-Weld Fleece Back	various	TAS 131	Reinforced white or colored TPO membrane with fleece backing.
Sure-Weld Fleece Back AFX	Various	TAS 131	Reinforced white or colored TPO membrane with fleece backing.
Sure-Weld Fleece Back AFX Plus	Various	TAS 131	Reinforced white or colored TPO membrane with fleece backing.
Sure-Weld, Sure-Weld EXTRA	various	TAS 131	Reinforced white or colored TPO membrane.
Sure-Weld GSD, Sure-Weld HS	various	TAS 131	Reinforced white or colored FR TPO membrane.
CCW 702 Primer	various	TAS 110	Solvent-Based Primer
CCW 702LT Primer	various	TAS 110	Low-Temperature Solvent-Based Primer
CCW 714 Primer	various	TAS 110	Water-Based Primer
CCW 725 Vapor Barrier	various	TAS 110	40 mil Vapor Barrier
Fast 100 Adhesive	various	TAS 110	Spray Polyurethane Adhesive
Fast 100-P Adhesive	various	TAS 110	Spray Polyurethane Adhesive
Fast 102 Adhesive	various	TAS 110	Spray Polyurethane Adhesive
Carlisle One Step	Various	TAS 110	Polyurethane Adhesive
Carlisle Olybond 500 BA	Various	TAS 110	Polyurethane Adhesive
Carlisle Versigrip	Various	TAS 110	Polyurethane Adhesive
Carlisle Foamular Durapink Insulation	various	TAS 110	Extruded Polystyrene for white or black mechanically fastened roof systems.
Sure-Weld Bonding Adhesive	various	TAS 110	Solvent-based bonding adhesive.
Aqua Base 120 Bonding Adhesive	Various	TAS 110	Water-based bonding adhesive
Cold Applied Adhesive	Various	TAS 110	Asphalt-modified Polyether adhesive

APPROVED INSULATIONS:

TABLE 2

Product Name	Product Description	Manufacturer (With Current NOA)
Polyisocyanurate HP-H	Isocyanurate Insulation	Carlisle Syntec

APPROVED FASTENERS:

TABLE 3

Fastener Number	Product Name	Product Description	Dimensions	Manufacturer (With Current NOA)
1.	N/A	N/A	N/A	N/A

EVIDENCE SUBMITTED:

Test Agency	Test Identifier	Description	Date
Atlantic & Caribbean Roof Consulting, LLC.	11-034	TAS 114 Appendix D	06/28/11
	11-035	TAS 114 Appendix D	06/28/11
	11-037	TAS 114 Appendix D	06/29/11
Architectural Testing Inc.	ATI-37490.01	Membrane Brittleness Testing	7/7/00
Factory Mutual Research Corp.	3022174	Wind Uplift and Fire Classification	09/25/06
Factory Mutual Research Corp.	3Z9A1.AM	Wind Uplift and Fire Classification	10/15/97
Factory Mutual Research Corp.	1B7A5.AM	Wind Uplift and Fire Classification	02/23/98
Factory Mutual Research Corp.	Approval Guide Excerpt	Wind Uplift and Fire Classifications Listings	5/00
Factory Mutual Research Corp.	3011220	Class 4470	08/16/01
Factory Mutual Research Corp.	3012879	Class 4470	04/04/03
Celotex Corporation Testing Services	520257	Membrane Physical Property Testing	4/19/00
SGS U.S. Testing Company Inc.	131248-R2	Membrane Ozone Resistance Testing	1/6/00

APPROVED ASSEMBLIES

Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced and FleeceBacked

Deck Type 4I: Lightweight Concrete, Insulated, over Structural Concrete Deck

Deck Description: Elastizell Range II Lightweight Insulating Concrete.

System Type A(1): One or more layers of insulation adhered with Fast Adhesive. Membrane fully adhered.

All General and System Limitations apply.

Insulation Layer	Insulation Fasteners (Table 3)	Fastener Density/ft^2
Polyisocyanurate HP-H Minimum 1" thick	**N/A**	**N/A**

Note: All insulation shall be adhered to the deck with FAST Adhesive at a rate of 1 gal./sq. Please refer to Roofing Application Standard RAS 117 for insulation attachment. Insulation listed as base layer only shall be used only as base layers with a second layer of approved top layer insulation installed as the final membrane substrate. Composite insulation panels used as a top layer shall be placed with the Polyisocyanurate side facing down.

Vapor Retarder: None

Barrier: None.

Membrane: Sure-Weld or Sure-Weld HS, 45 or 60 mil membrane or Sure-Weld EXTRA, 72 or 80 membrane fully adhered to the lightweight deck using Sure-Weld Bonding Adhesive applied at a rate of 1 gal/60 ft² or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/60 ft².
Or
Sure-Weld FleeceBack 100 or 115 mil membrane fully adhered to the lightweight deck using FAST Adhesive applied at a rate of 1 gal/sq. or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft².
Or
Sure-Weld FleeceBACK AFX or Sure-Weld FleeceBACK AFX Plus membrane adhered to the insulation in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-25 lbs./sq or Cold Applied Adhesive applied to the substrate at a rate of 1 gal/67 ft^2.

Maximum Design Pressure: -322.5 psf with FAST Adhesive (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, TPO, Reinforced and FleeceBacked

Deck Type 4: Lightweight Concrete, Non-insulated, over Steel Deck

Deck Description: Cellular or Aggregate Lightweight Concrete

System Type F(1): Membrane fully adhered to primed lightweight insulating concrete deck.

All General and System Limitations apply.

Vapor Retarder: None

Barrier: None.

Membrane: Sure-Weld or Sure-Weld HS, 45 or 60 mil membrane or Sure-Weld EXTRA, 72 or 80 membrane fully adhered to the lightweight deck using Sure-Weld Bonding Adhesive applied at a rate of 1 gal/60 ft² or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/60 ft².
Or
Sure-Weld FleeceBack 100 or 115 mil membrane fully adhered to the lightweight deck using FAST Adhesive applied at a rate of 1 gal/sq. or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1 gal/120 ft².

Maximum Design Pressure: -45 psf. (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, TPO, FleeceBacked

Deck Type 4: Lightweight Concrete, Non-insulated, over Steel Deck

Deck Description: Celcore Cellular Lightweight Concrete over 18-22 ga Steel Deck

System Type F(2): Membrane fully adhered to primed lightweight insulating concrete deck.

All General and System Limitations apply.

Deck: Minimum 22 ga. steel deck secured to supports space at maximum 4 ft o.c. with ITW Buildex Traxx/5 spaced at 6" o.c.

Vapor Retarder: None

Membrane: Sure-Weld FleeceBack 100 or 115 mil membrane fully adhered to the lightweight deck using FAST Adhesive applied at a rate of 1 gal/sq.

Maximum Design Pressure: -90 psf. (See General Limitation #9)

Membrane Type: Single Ply, Thermoplastic, TPO, FleeceBacked

Deck Type 4: Celcore Lightweight Insulating Concrete, over Structural Concrete Deck

Deck Description: Celcore Lightweight Insulating Concrete

System Type F(3): Membrane fully adhered to primed lightweight insulating concrete deck.

All General and System Limitations apply.

Vapor Retarder: None

Membrane: Sure-Weld or Sure-Weld HS 45 or 60mil or Sure-Weld EXTRA 72 to 80 mil membrane fully adhered to the lightweight deck using Sure-Weld Bonding adhesive or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1gal./60ft^2.

Or

Sure-Weld FleeceBACK 100 or 115 mil membrane fully adhered to the lightweight deck using FAST adhesive applied at a rate of 1 gal./sq or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1gal./120ft^2

Maximum Design Pressure:

-205 psf. with Sure-Weld FleeceBACK & FAST Adhesive

-90 psf using Sure-Weld & Sure-Weld Bonding Adhesive

-67.5 psf using Sure-Weld & Aqua Base 120 Bonding Adhesive

-90 psf using Sure-Weld FleeceBACK & Aqua Base 120 Bonding Adhesive

(See General Limitation #9 for all options)

Membrane Type: Single Ply, Thermoplastic, TPO, FleeceBacked

Deck Type 4: Elastizell Range II Lightweight Insulating Concrete, over Structural Concrete Deck

Deck Description: Elastizell Range II Lightweight Insulating Concrete

System Type F(4): Membrane fully adhered to primed lightweight insulating concrete deck.

All General and System Limitations apply.

Vapor Retarder: None

Membrane: Sure-Weld or Sure-Weld HS 45 or 60mil or Sure-Weld EXTRA 72 to 80 mil membrane fully adhered to the lightweight deck using Sure-Weld Bonding adhesive or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1gal./60ft^2.
Or
Sure-Weld FleeceBACK 100 or 115 mil membrane fully adhered to the lightweight deck using FAST adhesive applied at a rate of 1 gal./sq or Aqua Base 120 Bonding Adhesive applied to the substrate at a rate of 1gal./120ft^2

Maximum Design Pressure:
-205 psf. with Sure-Weld FleeceBACK & FAST Adhesive
-90 psf using Sure-Weld FleeceBACK & Aqua Base 120 Bonding Adhesive
-67.5 psf using Sure-Weld & Aqua Base 120 Bonding Adhesive
-90 psf using Sure-Weld & Sure-Weld Bonding Adhesive
(See General Limitation #9 for all options)

LIGHTWEIGHT INSULATING CONCRETE SYSTEM LIMITATIONS:

1. If mechanical attachment to the structural deck through the lightweight insulating concrete is proposed, a field withdrawal resistance testing shall be performed to determine equivalent or enhanced fastener patterns and density. All testing and fastening design shall be in compliance with Testing Application Standard TAS 105 and Roofing Application Standard RAS 137, calculations shall be signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant.

2. For steel deck application where specific deck construction is not referenced: The deck shall be a minimum 22 gage attached with 5/8" puddle welds with weld washers at every flute with maximum deck spans of 5 ft. o.c.

3. For Systems where specific lightweight insulating concrete si referenced consult current lightweight insulating concrete NOA for specific deck construction and limitations. For systems where specific lightweight insulating concrete is not referenced, the minimum design mix shall be a minimum of 300 psi.

GENERAL LIMITATIONS:

1. Fire classification is not part of this acceptance, refer to a current Approved Roofing Materials Directory for fire ratings of this product.
2. Insulation may be installed in multiple layers. The first layer shall be attached in compliance with Product Control Approval guidelines. All other layers shall be adhered in a full mopping of approved asphalt applied within the EVT range and at a rate of 20-40 lbs./sq., or mechanically attached using the fastening pattern of the top layer
3. All standard panel sizes are acceptable for mechanical attachment. When applied in approved asphalt, panel size shall be 4' x 4' maximum.
4. An overlay and/or recovery board insulation panel is required on all applications over closed cell foam insulations when the base sheet is fully mopped. If no recovery board is used the base sheet shall be applied using spot mopping with approved asphalt, 12" diameter circles, 24" o.c.; or strip mopped 8" ribbons in three rows, one at each sidelap and one down the center of the sheet allowing a continuous area of ventilation. Encircling of the strips is not acceptable. A 6" break shall be placed every 12' in each ribbon to allow cross ventilation. Asphalt application of either system shall be at a minimum rate of 12 lbs./sq. **Note: Spot attached systems shall be limited to a maximum design pressure of -45 psf.**
5. Fastener spacing for insulation attachment is based on a Minimum Characteristic Force (F') value of 275 lbf., as tested in compliance with Testing Application Standard TAS 105. If the fastener value, as field-tested, are below 275 lbf. insulation attachment shall not be acceptable.
6. Fastener spacing for mechanical attachment of anchor/base sheet or membrane attachment is based on a minimum fastener resistance value in conjunction with the maximum design value listed within a specific system. Should the fastener resistance be less than that required, as determined by the Building Official, a revised fastener spacing, prepared, signed and sealed by a Florida Registered Engineer, Architect, or Registered Roof Consultant may be submitted. Said revised fastener spacing shall utilize the withdrawal resistance value taken from Testing Application Standards TAS 105 and calculations in compliance with Roofing Application Standard RAS 117.
7. Perimeter and corner areas shall comply with the enhanced uplift pressure requirements of these areas. Fastener densities shall be increased for both insulation and base sheet as calculated in compliance with Roofing Application Standard RAS 117 and/or RAS 137. Calculations prepared, signed and sealed by a Florida registered Professional Engineer, Registered Architect, or Registered Roof Consultant **(When this limitation is specifically referred within this NOA, General Limitation #9 will not be applicable.)**
8. All attachment and sizing of perimeter nailers, metal profile, and/or flashing termination designs shall conform with Roofing Application Standard RAS 111 and applicable wind load requirements.
9. The maximum designed pressure limitation listed shall be applicable to all roof pressure zones (i.e. field, perimeters, and corners). Neither rational analysis, nor extrapolation shall be permitted for enhanced fastening at enhanced pressure zones (i.e. perimeters, extended corners and corners). **(When this limitation is specifically referred within this NOA, General Limitation #7 will not be applicable.)**
10. All membranes or packaging shall bear the imprint or identifiable marking of the manufacturer's name or logo and the following statement: "Miami-Dade County Product Control Approved" or the Miami-Dade County Product Control Seal as shown below.

MIAMI-DADE COUNTY APPROVED

11. All products listed herein shall have a quality assurance audit in accordance with the Florida Building Code and Rule 9N-3 of the Florida Administrative Code.

END OF THIS ACCEPTANCE